

# Feeding Behavior of an Asian Water Monitor *Varanus salvator macromaculatus* on a Bornean Bearded Pig *Sus barbatus barbatus* Carcass

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**Abstract** – The Southeast Asian water monitor *Varanus salvator* is considered to be a generalist carnivore. Here, we describe an observation of a *V. s. macromaculatus* feeding on a dead adult Bornean bearded pig *Sus barbatus barbatus* in Borneo, and review other cases of *V. salvator* feeding on *Sus* species elsewhere in southeast Asia.

## Introduction

The Southeast Asian water monitor *Varanus salvator* is considered to be a generalist carnivore. Its diet includes large invertebrates and small vertebrates such as insects, fish, crabs, freshwater turtles, sea turtles, lizards, crocodiles and their eggs, birds and their eggs, and rats, in addition to carrion (Das, 2010; Gaulke, 1991, 1992; Gaulke & Horn, 2004; Shine *et al.*, 1998; Traeholt, 1994a,b). Opinions on the relative importance of carrion vary between authors. Although documented species-specific data on its diet and feeding techniques are scarce (Bundhitwongrut *et al.* 2008), it is increasingly reported (*e.g.*, Bundhitwongrut *et al.*, 2008; Cota & Sommerlad, 2013; Karunarathna *et al.*, 2008; Losos & Greene, 1988; Stanner, 2010).

## Observations

At 1628 h on 9 October 2015, we observed a *V. salvator macromaculatus* feeding on a dead adult Bornean bearded pig *Sus barbatus barbatus* on the muddy banks of the Kinabatangan River, near Sukau, Sabah, Borneo (5° 32' N; 118° 17' E) (Figs. 1 & 2). The pig showed no obvious signs of decomposition or injury, was largely intact, and the cause of death was not obvious. A saltwater crocodile *Crocodylus porosus* was also watching the feeding event from the water, approximately 10 m from the bank. During the 10 minutes of observation, the water monitor fed on the pig's soft internal tissues which were obtained by the monitor's head entering a cavity in the pig's abdomen (Fig. 2). The monitor was cautious throughout the feeding event. On returning to the site approximately 50



Fig. 1. *Varanus salvator macromaculatus* with dead Bornean bearded pig. Photographed by **James Fitzsimons**.



Fig. 2. Head of *V. salvator macromaculatus* entering a cavity in the Bornean bearded pig to obtain soft organs. Photographed by **James Fitzsimons**.

minutes later, the monitor was still feeding on the pig carcass in the same manner (for a further 10 minutes of observation) and the crocodile was still watching from the water.

## Discussion

Besides considerable human hunting pressure, few predators of *S. b. barbatus* are recorded (Meijaard *et al.*, 2011), although clouded leopards and reticulated pythons have been known to take piglets (Curran, in Meijaard, 2000; Phillipps & Phillipps, 2016). Our observation appears to be the first of a *V. salvator macromaculatus* feeding on a dead *S. b. barbatus*. However, in North Sumatra, Boogaarts (1938, in Meijaard, 2016), recorded Asian water monitors feeding on dead banded pigs *S. scrofa vittatus*: “We found three specimens which had been taken by tigers, and from which these had only removed the most desirable bits of meat. Monitor lizards and bears had removed the remainder of the carcasses”. In the Phillipines, Gaulke (1992) reported water monitors in feeding aggregation on two ‘*Sus barbatus*’ carcasses on Calauit Island, Palawan Province. However, recent taxonomic treatment recognizes this pig taxon as a separate species, the Palawan bearded pig *S. ahoenobarbus*. Nonetheless, Gaulke (1992) suggests the ability of water monitors to detect large carcasses (such as pigs) in places like the Phillipines to be low considering such potential prey are widely exploited by humans, but where detected, have an occasional

importance as a food source with high nutritional value and low energy cost when compared to hunting.

Like the observations of Boogaarts (1938) and Gaulke (1992), our observations in Sabah of a *V. salvator macromaculatus* feeding on the carcass of a *S. b. barbatus* were almost certainly a case of carrion consumption.

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